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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,810	08/05/2002	Lutz Brandt	FA-1068	3040

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EXAMINER	
TSOY, ELENA	
ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/089,810	BRANDT ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2004* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Rejection of claims 10-22 under 35 U.S.C. 102(e) as being anticipated by Betz et al (US 6,261,645) has been withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 10, 12, 13, 15, 19-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Betz et al (US 6,261,645) in view of Bishop et al (US 4,609,718, which corresponds to EP 204161).

Betz et al disclose a process for producing scratch resistant (See column 2, lines 61-67; column 3, lines 1-8) multicoat finishes in which a pigmented basecoat applied to the substrate surface, a clear topcoat coating composition comprising **two** or more radiation curable binders (See column 3, lines 1-4; column 5, lines 42-54) based on prepolymers or oligomers such as urethane acrylates (methacrylates) (See column 5, lines 47-54, 62, 64) is applied atop the resultant basecoat film, and then the topcoat film is cured (See column 9, lines 33-36, 57-67) by means of radiation, preferably by means of UV radiation (See column 10, lines 6-10). Aliphatic urethane acrylates (methacrylates) are particularly preferred binders (See column 6, lines 2-5). The binders can be used in the coating composition in an amount 5-90 wt % (See column 8, lines 14-21). The coating composition may if desired include one or more reactive diluents, which are employed preferably in an amount of from 0 to 70% by weight, with particular preference from 15 to 65% by weight, based in each case on the overall weight of the coating composition in the case of clear coats (See column 8, lines 22-34). The prepolymers or oligomers normally have a number-average molecular weight of from 500 to 50,000, preferably from 1000 to 5000 and preferably have at least 2 and, with particular preference, from 3 to 6 double bonds per molecule, and preferably also have a double bond equivalent weight of from 400 to 2000, with particular preference from 500 to 900 (See column 6, lines 12-23). The coating composition is particularly suitable as a topcoat for producing a multicoat finish in the sector of the automotive OEM finishing and/or automotive refinishing (i.e. over outer finish) of car bodies and parts thereof and also truck bodies, and the like (See column 10, lines 1-5). The urethane (meth)acrylates are well known in the art and can be made by reacting di- or polyisocyanurate with hydroxyalkyl methacrylate and diols/polyols (See column 7, lines 14-54) such as a process described in EP 204 161) (See column 7, lines 52-54).

However, Betz et al fail to teach that the diisocyanurate is an acyclic aliphatic diisocyanate having 8 C atoms (Claims 10, 13).

Bishop et al (which corresponds to EP 204161) teach that any organic diisocyanate can be used to form the acrylate-terminated oligomers, such as a diisocyanate in which a linear aliphatic chain containing 6 carbon atoms separates the two isocyanate groups (an acyclic aliphatic diisocyanate having 8 C atoms) (See column 3, lines 65+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a process described by Bishop et al with the use of a diisocyanate in which a linear aliphatic chain containing 6 carbon atoms separates the two isocyanate groups for making urethane (meth)acrylates of Betz et al since Betz et al teach that polyurethane acrylates can be made by a process described in Bishop et al (which corresponds to EP 204161).

As to claims 23, 24, Betz et al in view of Bishop et al fail to teach that the clear topcoat is applied to areas of outer finish susceptible to scratching (Claim 23) such as near locks, door handles, etc. (Claim 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied a coating composition of Betz et al to areas of outer finish susceptible to scratching such as near locks, door handles, etc. with the expectation of providing the desired scratch resistance, since Betz et al teach that the coating composition is scratch resistant (See column 2, lines 61-67; column 3, lines 1-8) and is particularly suitable as a topcoat for producing a multicoat finish in the sector of the automotive OEM finishing and/or automotive refinishing (i.e. over outer finish) of car bodies and parts thereof and also truck bodies, and the like (See column 10, lines 1-5).

5. **Claims 11, 14, 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Betz et al (US 6,261,645) in view of Bishop et al (US 4,609,718, which corresponds to EP 204161), further in view of Heil et al (US 4,666,783).

Betz et al in view of Bishop et al fail to teach that linear aliphatic diisocyanates having 8 C atoms is hexamethylene diisocyanate (Claim 16); polyisocyanates based on acyclic aliphatic diisocyanates having 8 C atoms contain heteroatom groups linking isocyanate groups together in said polyisicyanates (Claims 11, 14), said polyisocyanates being polyisocyanates with isocyanurate groups or with biuret groups (Claim 17) such as tris-(6-isocyanatohexyl)-biuret or isocyanurate derived from hexane diisocyanate (Claim 18).

Heil et al teach that various diisocyanates including aliphatic diisocyanates such as hexamethylene diisocyanate (See column 6, line 31)) or polyisocyanates derived by biuretization of hexamethylene diisocyante or by trimerization of hexamethylene diisocyante to isocyanurate (See column 6, lines 54-64) are suitable for the preparation of polyurethane acrylate polymers (See column 7, lines 39-47) by reacting said polyisocyanates with hydroxyalkyl methacrylate and diols/polyols (See column 7, lines 5468; column 8, lines 4-45). In other words, Heil et al teach that hexamethylene diisocyanate and polyisocyanates derived by biuretization of hexamethylene diisocyante or by trimerization of hexamethylene diisocyante to isocyanurate are suitable for the preparation of polyurethane acrylate polymers by reacting said polyisocyanates with hydroxyalkyl methacrylate and diols/polyols.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used hexamethylene diisocyanate or polyisocyanates derived by biuretization of hexamethylene diisocyanate or by trimerization of hexamethylene diisocyanate as polyisocyanates of Betz et al in view of Bishop et al for preparing polyurethane acrylate polymers since Heil et al

teach that hexamethylene diisocyanate and polyisocyanates derived by biuretization of hexamethylene diisocyante or by trimerization of hexamethylene diisocyante to isocyanurate are suitable for the preparation of polyurethane acrylate polymers by reacting said polyisocyanates with hydroxyalkyl methacrylate and diols/polyols.

It is held that the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945). See also In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a container of a type made of plastics prior to the invention was held to be obvious); Ryco, Inc. v. Ag-Bag Corp., 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988).

6. **Claims 10-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Betz et al (US 6,261,645) in view of Heil et al (US 4,666,783).

Betz et al, as was discussed above, teach that the urethane (meth)acrylates are well known in the art and can be made by reacting di- or polyisocyanurate with hydroxyalkyl methacrylate and diols/polyols (See column 7, lines 14-54). However, Betz et al fail to teach that polyisocyanates are acyclic aliphatic diisocyanates having 8 C atoms (Claims 10, 13); or based on acyclic aliphatic diisocyanates having 8 C atoms containing heteroatom groups linking isocyanate groups together in said polyisicyanates (Claims 11, 14); or polyisocyanates with isocyanurate groups or with biuret groups (Claim 17) such as tris-(6-isocyanatohexyl)-biuret or isocyanurate derived from hexane diisocyanate (Claim 18).

Heil et al teach that various diisocyanates including aliphatic diisocyanates such as hexamethylene diisocyanate (See column 6, line 31)) or polyisocyanates derived by biuretization of hexamethylene diisocyante or by trimerization of hexamethylene diisocyante to isocyanurate

(See column 6, lines 54-64) are suitable for the preparation of polyurethane acrylate polymers (See column 7, lines 39-47) by reacting said polyisocyanates with hydroxyalkyl methacrylate and diols/polyols (See column 7, lines 5468; column 8, lines 4-45). In other words, Heil et al teach that hexamethylene diisocyanate and polyisocyanates derived by biuretization of hexamethylene diisocyante or by trimerization of hexamethylene diisocyante to isocyanurate are suitable for the preparation of polyurethane acrylate polymers by reacting said polyisocyanates with hydroxyalkyl methacrylate and diols/polyols.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used hexamethylene diisocyanate or polyisocyanates derived by biuretization of hexamethylene diisocyanate or by trimerization of hexamethylene diisocyanate as polyisocyanates of Betz et al in view of Bishop et al for preparing polyurethane acrylate polymers since Heil et al teach that hexamethylene diisocyanate and polyisocyanates derived by biuretization of hexamethylene diisocyante or by trimerization of hexamethylene diisocyante to isocyanurate are suitable for the preparation of polyurethane acrylate polymers by reacting said polyisocyanates with hydroxyalkyl methacrylate and diols/polyols.

Response to Arguments

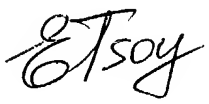
7. Applicant's arguments with respect to claims 10-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Elena Tsoy
Examiner
Art Unit 1762

March 23, 2004